

CLAIMS

1. A transparent positive electrode for gallium nitride-based compound semiconductor light-emitting devices, comprising a contact metal layer in contact with a p-type semiconductor layer, a current diffusing layer on the contact metal layer, the current diffusing layer having an electrical conductivity larger than that of the contact metal layer, and a bonding pad layer on the current diffusing layer.
2. The transparent positive electrode according to claim 1, wherein the contact metal layer is a platinum group metal or an alloy containing a platinum group metal.
3. The transparent positive electrode according to claim 2, wherein the contact metal layer is platinum.
4. The transparent positive electrode according to any one of claims 1 to 3, wherein the thickness of the contact metal layer is from 0.1 to 7.5 nm.
5. The transparent positive electrode according to claim 4, wherein the thickness of the contact metal layer is from 0.1 to 5 nm.
6. The transparent positive electrode according to claim 5, wherein the thickness of the contact metal layer is from 0.5 to 2.5 nm.
7. The transparent positive electrode according to any one of claims 1 to 6, wherein the current diffusing layer is a metal selected from the group consisting of gold, silver and copper, or an alloy containing at least one member of gold, silver and copper.
8. The transparent positive electrode according to claim 7, wherein the current diffusing layer is gold.
9. The transparent positive electrode according to any one of claims 1 to 8, wherein the thickness of the current diffusing layer is from 1 to 20 nm.
10. The transparent positive electrode according to claim 9, wherein the thickness of the current diffusing layer is from 1 to 10 nm.

11. The transparent positive electrode according to claim 10, wherein the thickness of the current diffusing layer is from 3 to 6 nm.

5 12. A gallium nitride-based compound semiconductor light-emitting device comprising the transparent positive electrode according to any one of claim 1 to 11.